

Abstract of the Disclosure

The disclosure concerns to an optical filter for use in an optical communication device such as a multiplexer and demultiplexer. The optical filter is a Fabry-Perot filter that is formed with a silicon substrate by using a silicon micromachining process and a silicon etching process. The optical filters are applied to various optical communication devices, such as multiplexer (MUX) or demultiplexer (DEMUX).

In each of the optical communication devices, the optical filters are installed and integrated on the silicon substrate together with input/output optical fibers and collimating lenses, resulting in simplifying the manufacturing process thereof and, hence, in reducing the manufacturing cost thereof.

Furthermore, each of the optical filters incorporates therein an actuator so as to be tunable (wavelength-selective) in the optical filtering function and to be capable of filtering more various wavelengths in a range.